

storm struck the town at 4 p. m.; large two-story brick buildings were lifted from their foundations and the ruins scattered in all directions; frame dwellings were overturned and crushed into splinters; large trees were uprooted and carried long distances; and animals were picked up, carried various distances, and dropped lifeless along the path of the storm. Just before the funnel-shaped cloud struck the town, a loud roaring noise was heard, which was followed by several loud electrical explosions. The funnel-shaped mass had a rapid rotary motion, drawing within its vortex everything with which it came in contact. The storm-track was about two hundred yards wide, with a zigzag course from southwest to northeast.

At Benick, Randolph county, about 6 p. m., sixty miles northeast of Brownsville, a tornado exhibited considerable violence, which was attended by a whirling motion.

At Montrose, Henry county, 4.10 p. m., a violent tornado did much damage.

In Reynolds county, Missouri, on the 8th, at 6 p. m., a small tornado, about one hundred yards wide, swept everything clean in its path. The same locality was visited by the memorable tornado of 1850.

Pennsville, Pennsylvania, on the 19th: a severe storm burst suddenly on this community about 4 p. m.; it was of short duration and very limited in its track. It moved from southwest to northeast, passing over the northern part of Fayette county. The destruction by this tornado has never before been equalled by any like occurrence. Buildings were demolished or unroofed; chimneys, fences and trees blown down; and a number of persons were injured, some of whom have since died.

New Orleans, April 22d, a tornado swept across the Chicago, Saint Louis and New Orleans railroad, between Summit and Bayou Chitto, Mississippi, prostrating telegraph poles on both sides of the track for a distance of one mile and uprooting trees, many of them falling across the railroad.

Monticello, a town twenty miles east of Brookhaven at 12:15 p. m., was nearly destroyed—only three houses, on the outskirts, being left. Nothing before has ever been experienced, like this, at this place. Ten persons were killed instantly. Out of a population of one hundred and fifty, very few escaped without injury. A fine residence, four miles west of Monticello, was entirely destroyed.

Natchez, Mississippi, 19th, about nine p. m., a storm of great severity burst upon the city, continuing for a few minutes, during which time it wrecked buildings, uprooted trees, prostrated fences and tore signs from their fastenings, while the accompanying rain deluged cellars, doing an incalculable amount of damage. Great damage was done to fruit and spring vegetables by the hail. The course of the storm was from northwest to southeast.

Abilene, Kansas, 7th, heavy rain and wind storm doing considerable damage in the eastern and southwestern parts of Dickinson counties.

At Chapman, a church was demolished; roofs of several houses were blown off; barns and other buildings damaged.

At Woodbine, a church, three buildings and a blacksmith shop were demolished.

On Holland creek, eighteen miles southwest from Abilene, considerable damage was done. This storm struck the counties at the southwest corner and traveled in a northeasterly course.

On the same date, at Rosalia township, in Butler county, Kansas, 10.30 p. m., three houses were overturned, one man killed and several persons injured. The storm was from southwest to northeast.

Junction City, Kansas.—About midnight a tornado passed over this neighborhood from the southwest which was very destructive.

At Fort Riley, Kansas, most of the buildings were unroofed and a portion of the walls destroyed, involving a loss of from \$25,000 to \$30,000. At Wakefield, Clay county, eight houses were destroyed. In all parts of the county, barns, out-houses and fences were destroyed.

Maysville, Kentucky, 28.—A tornado has caused great destruction on Tuckehoe ridge; several large tobacco houses were blown down and their contents scattered. At Lawrence, a brick church was unroofed and one end blown in; a school-house, two dwellings and a number of barns and out-buildings were destroyed. The storm was the most violent ever known in this section.

VERIFICATIONS.

INDICATIONS.

The detailed comparison of the tri-daily indications for April, 1882, with the telegraphic reports for the succeeding twenty-four hours, shows the general average percentage of verifications to be 84.9 per cent. The percentages for the four elements are: Weather, 87.1; Direction of the Wind, 88.1; Temperature, 84.1; Barometer, 79.1 per cent. By geographical districts they are: For New England, 82.6; middle Atlantic states, 85.0; south Atlantic states, 84.4; east Gulf states, 87.4; west Gulf states, 86.0; lower lake region, 86.2; upper lake region, 83.8; Tennessee and the Ohio valley, 83.1; upper Mississippi valley, 83.9; lower Missouri valley, 84.1; northern Pacific coast region, 94.1; middle Pacific coast region, 78.0; southern Pacific coast region, 98.6.

There were 96 omissions to predict (38 being due to the absence of reports from the Pacific coast) out of 3,690, or 2.33 per cent. Of the 3,594 predictions that have been made, 98, or 2.73 per cent., are considered to have entirely failed; 102, or 2.84 per cent., were one-fourth verified; 397, or 11.04 per cent., were one-half verified; 673, or 18.73 per cent., were three-fourths verified; 2,324, or 64.66 per cent., were fully justified, so far as can be ascertained by the tri-daily reports.

CAUTIONARY SIGNALS.

One hundred and ninety-five cautionary signals were displayed during the month of April, of which one hundred and sixty-eight, or 86.1 per cent., were justified by winds of twenty-five miles per hour, at, or within, one hundred miles of the station. Thirteen "off-shore" signals were displayed, of which nine, or 69.2 per cent., were fully justified; twelve, or 92 per cent., were justified as to velocity; and ten or 76.9 per cent., were justified as to direction; Of all kinds displayed, there were two hundred and eight, of which one hundred and seventy-seven, or 85.1 per cent., were justified. Thirteen cautionary signals were changed to "off-shore" signals. The above does not include signals ordered at sixty-nine display stations, where the velocity is estimated only.

NAVIGATION.

STAGE OF WATER IN RIVERS.

In the table on the right hand of chart number iii., are given the highest and lowest stages of water observed at Signal Service stations during the month of April. At stations in the lower Mississippi it will be seen that the water has fallen from the first of the month, when it was above the danger-line at Cairo and Vicksburg, and only five inches below the danger-line at Memphis. At the close of the month it had fallen at all stations south of Cairo, but remained two feet above the danger-line at Vicksburg. At stations in the upper Mississippi the highest water occurred between the twentieth and thirtieth. On the twenty-fifth, at Keokuk, it was two feet and two inches above the danger-line, or sixteen feet eight inches on the gauge. The lower Missouri reached its maximum about the tenth of the month, and was at its minimum height from the third to fifth. The Ohio was highest at Pittsburg on the twenty-eighth, and highest at Louisville and Cincinnati from the first to the third of the month.

ICE IN RIVERS AND HARBORS.

Lake Champlain: Burlington, Vermont, 5th, steamer "Williams" left this port for Plattsburg, New York, but was unable